Early Marriage and Associated Health Consequences among Female Children in Giza Governorate

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Abstract

Background: Early marriage known as child marriage, is defined as any marriage carried out below the age of 18 years, before the girl is physically, physiologically, psychologically and social ready to shoulder the responsibilities of marriage and childbearing. Early marriage therefore has major consequences for public health, national security, social development, human rights, economic development and gender equality. **Aim:** assess associated health consequences regarding early marriage among female children in Giza Governorate. **Methodology: design:** descriptive correctional design was utilized at August 2018 - November 2018. **Setting: Baharms village at Manshiat El-kanater center in Giza Governorate. Subject:** Simple random sample included 100 girls experienced with early married before 18 years. **Tools of data collection**: Tool I: Pre designed interview questionnaire sheet included demographic data related marriage. Tool II: Bio-psychosocial hazards questionnaire sheet among female children. **Results:** 37% of the selected female children exposed to aged from 16 – 18 year during married. 75% of selected female children had previous early marriage in their families. 76% of the female children did not have enough information about marriage before their marriage. 41% of the selected female children forced marriage. **Conclusions:** The current study indicated that more than half of the selected female children experienced menstrual disorders, vaginal tearing and bleeding from the effects of intercourse, While the current study showed that the selected female children experienced violence, troubles in the sexual relationship. Regarding social hazards, the majority of the selected female suffered from withdrawal after marriage, and the majority of them did not support the idea of early marriage. There was highly statistically significant with positive correlation between biological hazards and psychological hazards. Also, there was highly statistically significant with positive correlation biological and social hazards. As well as, there was highly statistically significant with positive correlation between psychological and social hazards regarding early marriage. **Recommendation:** Applying health education program among female students in preparatory schools and their caregivers to increase their awareness regarding early marriage and health consequences. Periodic follow up for female children by midwifes, obstetrics and gynecological nurse and family health nurses to detect health consequences related early marriage. Home visiting home visit for female children to detect biopsychosocial problems due to early marriage.

Keywords: Early Marriage, Associated Health Consequences, Female Children

Introduction

Early marriage is a worldwide problem associated with a range of health and social consequences for teenage girls, leads to inequality and discrimination in the lives of women. While the age of marriage is rising for both sexes, early marriage has still remained a problem in some societies. Early marriage as a global issue and a widespread harmful practice affects enormous numbers of girls **(Mensch& Soler-Hampejsek, 2014)**. According to United Nations Population Fund, nearly one in three girls continues to marry as a teenager in many parts of the developing world. The extent of early marriage varies between countries and regions. The highest rates are reported in South Asia and Africa, where 44 percent and 39 percent of girls, respectively, were married before the age of 18. Every year, 15 million girls are locked away from a better life **(Santhya & Jejeebhoy, 2015)**.

United Nations Children Fund (UNICEF) defined early marriage as any marriage occurred underneath the age of 18 a long time. This age can be distinguished as early adolescent (age 10-13 years), middle adolescence (14 -16 year) and part of late

adolescence. Adolescence is a critical age for girls throughout the world. Adolescent is a phase of rapid growth and development during which physical, psychological, social, sexual and emotional changes occur that girls come to be unprepared to carry the duties of the marriage and childbearing **(UNICEF, 2019).** Adolescents are not homogeneous group and their needs vary with their gender, stage of development, life circumstances and the socio-economic conditions in which they live. What takes place during adolescent years shapes future life circumstances. For many girls in the developing world, the mere commencement of puberty marks a time of increased vulnerability to early marriage and entry into sexual life **(2018).**

Early marriage is most likely to occur among girls who are poor, have low education level, and live in rural areas **(Walker, Mukisa, Hashim & Ismail, 2018).** Child marriage violates girls' rights to health, education and opportunity to build life skills, separates them from family and friends, compromises their ability to assume health promotion practices and seek timely care, and enhances their vulnerability to considerable health and social problems **(Chandra-Mouli, Greifinger & Nwosu, 2018).** Early marriage had health, social, economic, and political implications for the girls, families and the community. It makes the girl's legally under the custody of their husbands and great limitation to their freedom and independence, these girls less schooling, and have less household decision-making power on their health and choices, specifically marriage practices such as the involvement of women in spouse choice, power in marital relationships, self-efficacy and domestic abuse more likely to happen to early married women **(Mokdad et al., 2016).**

Recent evidence argues that early marriage can be associated with adverse consequences not only for teenage girls but also for children they bear. Early marriage leads to a range of physical, intellectual, psychological and social problems on the teenage female and their future life. High rates of unintended pregnancy, early pregnancies, dangerous complications; pregnancy, abortion, preterm labor, delivery of low birth weight babies, and fetal and maternal mortality are observed among teenage girls and are strongly correlated with early marriage. Moreover, the girls who are married as teenagers are also affected psychologically and they are more likely to experience depression, anxiety, and other mood disorders. They are especially at risk for physical and sexual violence within marriage **(Sabbe, Oulami, Zekraoui, Hikmat, Temmerman, & Leye, 2018).**

Early marriage affects the sexual and reproductive health of female adolescents. Rapid physical growth commonly occurs within this age including the development of sexual organs and functions. Also, early marriage inhibits women to plan their pregnancy. So that will affect the health of the children, not only from the complications during pregnancy or labor but also from insufficient parenting skills especially within the first five years of the children growth and development **(Herliana et al., 2018).** Furthermore, Early marriage increases occurrence of psychological problems due to Physiological problems related with early marriage, these girls are more susceptible to sadness, nervousness, and despair anxious stress, mood changes, anxiousness and lack of confidence **(Shabbir et al., 2015).**

Community health nurse (CHN) has an important role regarding early marriage. CHN works to improve health and well-being of female children through educating them about the problem, prevention regarding health consequences of early marriage. Community health nurses can organize education programs to create awareness regarding early marriage in schools and family health centers. CHN can provide knowledge to the parents, mothers in law especially in extended families regarding importance of preventing early marriage and health consequences **(Rowe, Gedaly, Padget, & May, 2016).**

CHN can collaborate with key community leaders that included teachers, health-service providers, members of local governance, religious persons and other local civil society groups to achieve mass education programs. As a leader, Community health nurse instructs influences or persuades others to change their ideas regarding early marriage that will positively affect children's health. CHN can

conduct school health programs regarding early marriage among all early adolescent girls through school health nurse. As educator, CHN can organize meetings to create awareness among general population in different community settings **(Jame ,Mckenzie, Robert, Pinger, Jerome & Kotecki, 2015).**

Community health nurses have more responsibility as supervisors on creating awareness among adolescent girls regarding problems of early marriage by facilitating free distribution of pamphlet, booklet, handouts, posters and showing documentary films to community peoples. community health nurse is an advocate of children rights for maintaining health. They encourage the individuals to take the right. CHN can detect cases early as possible before marriage especially in rural areas. CHN apply focus group for education and counseling for susceptible children for early marriage. If the early marriage happened, CHN use psychological rehabilitation and referral to multi-professional team (**Clark, 2018)**.

Obstetric and gynecological nurses can offer female children with a whole range of support. Obstetric and gynecological nurses should deal with sexual and reproductive health problems as a consequence of early marriage. They can give female children support regarding their rights for growing family in the first few weeks and months. Obstetric and gynecological nurses manage complications of early marriage in clinics. Nurse can help new parents with a smooth introduction to their baby and parenting in general. Obstetric and gynecological nurses can delay the pregnancy of female children because they didn't have physical and psychological ability **(WHO, 2019)**.

If female children became pregnant, obstetric and gynecological nurses prepared them before the baby's birth. Obstetric and gynecological nurses screen and monitor new mothers and their babies' health. Obstetric and gynecological nurses can help female children who are suffering with post-natal depression. Obstetric and gynecological nurse as a midwife can visit female children in their homes to support them psychologically. Midwives manage health complication and consequences of female children. Midwife provides care of baby (feeding, winding, nappy changing, bathing, dressing/ undressing, settling to sleep) (**Alsaqa, Nashat, & Khalil, 2019**).

Significance of the study:

World Bank and the International Center for Research on Women (ICRW) reported that early marriage will cost developing countries trillions of dollars by 2030. Early marriage hinders the accessibility of women to health care; therefore, women who are young married may be at risk of maternal mortality and morbidity as complications during pregnancy and childbirth (**World Bank, 2017**).

The Egyptian Child Law of 2008 determined the minimum age of marriage at 18 years for both females and males. Despite the legislation, early marriage is still being practiced in some areas of the country especially rural areas. Egypt is one of the developing countries where about 23% of girls had been married earlier than the age of 18, almost 1 in each and every 20 adolescent girls (4%) between age 15 to 17 years and one in every 10 (11%) adolescent girls 15-19 years as presented in figure 1. One in six women is either married or had been married before, with giant differentials between the rural and urban residence (**Central Agency for Public Mobilization and Statistics (CAPMS), 2017**).

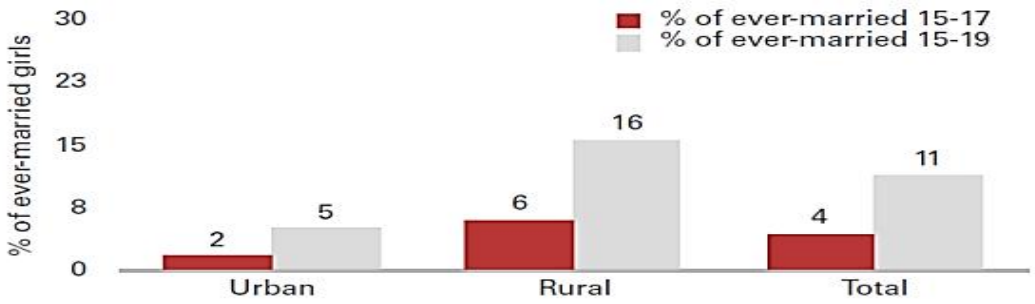

Figure 1: Prevalence of early marriage, by way of urban/rural residence

Central Agency for Public Mobilization and Statistics (CAPMAS), 2017, Census of Population, Housing and Establishments, Cairo, Egypt.

Early marriage increased in eight Governorates; Giza, El-Fayoom, El-Behara, Assuit, Souhag, North and South Sina and Matrooh. In 2014, Egypt developed the National Strategic Plan (NSP) for prevention of early marriage through National Population Council (NPC) that aimed to reduce the prevalence of child marriage by 50% within a five-year period. There is a strong political will to end child marriage through opportunities for adolescent girl development and empowerment, particularly in the light of the prevalence levels shown by Egypt's census 2017 (**Central Agency for Public Mobilization and Statistics (CAPMS), 2018**).

Egyptian Ministry of Health and Population (EMHP) allocated a budget for the population characteristics program in the 2015-2016 budget to achieve the four strategic goals including reducing early marriage. EMHP empower set of activities aimed at improving the capabilities of Egyptian women, marital understanding, the importance of education, and strong family concepts with the aim of reducing early marriage and reducing its rate to 50% from the current rate, which ranges between 13-15% according to researchers at the level of the Republic. No accurate statistics for early marriage phenomena except if there are health problems that happen to female children **(Ministry of Health and Population, 2018**).

According to the Egypt Census of 2018, child marriage remains an issue. In Egypt, nearly 1 in every 20 girls (4%) between the ages of 15 to 17 years are either currently married or were married before; the same applies for 1 in every 10 (11%) adolescent girls 15-19 years, with large differentials between the rural and urban residence. The sequences of child marriage in Egypt are very similar to other countries, such as gender-based violence, dropping out of school, high-risk of contracting diseases, higher fertility rates, contributing to the population increase and an increase in unregistered children (**CAPMS, 2018**).

The National Population Council has worked out a national strategy with a participatory methodology during 2014, to come up with the national strategic plan to reduce early marriage 2015-2020, including an executive plan with the participation of 64 agency, from ministries, private sector and civil society institutions through empowering and educating girls to find alternative opportunities and preparing them to deal with family and societal pressures, completing and updating legislation, activating protection laws, supporting girls who married early, reducing negative effects on children, family and community, and adopting inclusive public policies for young wives, in addition to development trends to confront the supportive environment for early marriage (**National Population Council, 2017**) .

The National Council for Childhood and Motherhood (NCCM) has been committed to ending child marriage. It provides reporting mechanisms through the Child Help line 16000 and the Family Counselling line 16021 providing support for children and families (**NCCM, 2017**). The National Council for Women (NCW) held a series of symposiums in most of governorates on early marriage and its impact on public health and female children and review of the causes of early marriage and

its effect on female children physically psychologically and socially. NCW has been actively combating the persistent issue in Egypt (**NCW, 2018**).

In gypt, study reported that adolescent girls who married before the age of 18 were more at risk of contracting diseases as they do not receive a premarital examination (PME). According to Law 126 of 2008, a prerequisite for registering a marriage contract is having a certificate from a public health office indicating that the couple has received the necessary health examination, which could potentially reduce the risk of disease transmission (**National Population Council, 2017**).

Early marriage is linked to a number of physical, psychological and social, health hazards (**Hamed & Yousef, 2017**). Adolescent girls married before 18 years are also extra exposed to physical and sexual violence than these married after 18 years, physical health hazards among girls is the ratios of unwanted pregnancies lead to frequent abortions, obstetric fistula and other complications. If newborns may be under- weight and the risk to anemia, increments the morbidity and mortality for girls and children **(Ahmed et al., 2014).**

So conducting the current study will add to body of nursing knowledge regarding phenomena of early marriage and its health consequences on female children. Also, the study will help nurses in family health centers, schools and gynecological clinics to be advocate for the female children through increasing awareness regarding their rights, providing care and help victims to detect health consequences of early marriage. Regarding nursing research, the current study will increase nursing researches regarding theis phenomena and recommendations will contribute in further researches regarding early marriage. This research aimed to assess the associated health consequences regarding early marriage among female children in Giza governorate.

Operational definition:

Female Children refer to adolescent (early adolescent from 10 to 13 years, middle adolescence from 14 to 16 year) girls who married below the legal age (18 years).

Aim:

The current study aimed to assess the associated health consequences regarding early marriage among female children in Giza governorate.

Research questions:

1. What are the associated health consequences regarding early marriage?

Methods:

Research design: descriptive correctional design was utilized at August 2018 - January November 2018.

Research Setting: The study was carried out at Baharms village at Manshiat El-kanater center in Giza Governorate. Baharms village is the poorest and small village in Manshiat El-kanater center**.** It has small building without infrastructure. **Subjects:** Simple random sample was used in the current study to select female children by using simple random sampling formula that allow each person has an equal chance of being selected, and since we know the population size (N) and sample size (n), the calculation can be as follows: P=1- N-1/N.N-2/N-1….N-n/N-(n-1). 100 girls experienced with early married before 18 years were selected by using random numbers table. The selected female children participated in the current study regardless educational level, type of family, residence and income. The selected female children was done from the even number of homes.

The instruments:

Study instrument included two tools:

Tool I: Pre designed interview questionnaire sheet which prepared by researcher post reviewing literature review **Amin et al., 2018** and contain two parts;

Part I: Demographic data of the girls such as educational level, residence, employment, income, type of family and ranking.

Part II: Data related marriage: Age during marriage, information of the select female children about marriage before their experience, present of previous early marriage at their families, having forced

obligation to agree and husband age during marriage.

Tool II: Bio- psychosocial hazards questionnaire sheet among female children related early marriage. This tool prepared by the researcher after reviewing literature review **Hamed & Yousef, 2017**; include biological hazard **regarding early marriage** which contain nine questions related to menstrual disorders, vaginal tearing, vaginal bleeding, Uterine rupture, osteoporosis, increasing blood pressure, muscle cramps, difficult delivery. Regarding psychological hazard, It contains five items (depression, exposure to violence, troubles in the sexual relationship, resorted to addiction, dealing properly with marital problems. While social hazard included five items (finishing school, withdraw from family, met social rights, experience with divorced, support the idea of early marriage). **Scoring System**: There were 19 questions that answered by yes/ no choices. Yes equals 2 scores while no equals 1 score. Total scores of Bio-psychosocial hazards questionnaire sheet was 38 scores. High hazard if score >70% (28-38 scores), moderate score if score 50 to 70% (20- 27 scores), low score if score <50% (0- 19 scores).

Field work:

Preparation phase: A review of recent national and international related literature using journals, periodicals, textbooks, internet, and theoretical knowledge of the various aspects concerning the topic of the study. Data collection tools were carried out over a period of four months from beginning of August 2018 - November 2018. The investigators prepared the tools and translated them into Arabic form to become ready for use. **Implementation phase**: The researcher distributed the data collection questionnaire sheets with instructions about how to fill them. The time required to fill the questionnaires sheet was taken from 25 to 30 minutes for completion. The filled forms were collected in time and revised to check their completeness to avoid any missing data.

Pilot Study:

The pilot study was conducted with 10 female children who represent 10% of total sample at the previously mentioned setting in order to test the applicability of the constructed tools and the clarity of the included tools. Also, to assess the reliability and validity of developing tool before using at the study. The pilot also served to estimate the time needed for each subject to fill in the questionnaire.

A group of experts in the community health nursing ascertained **the content's validity**; their opinions were elicited regarding the format, layout, consistency, accuracy, and relevancy of the tools. **Reliability testing** was carried out to test the reliability in terms of Cronbach's Alpha for tool I was 0.786 and Tool II was 0.803

Data collected from the studied sample was revised, coded, and entered using ersonal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 24. Data were presented using descriptive statistics in the form of number and percent. The Pearson product-moment correlation coefficient (or Pearson correlation coefficient, for short) is a measure of the strength of a linear association between two variables and is denoted by *r*.

Ethical consideration:

The research ethics committee revised and approved the study. The submission of the answer to the questionnaire was considered as consent to take part in the study. Confidentiality of the study subjects' data was sustained throughout the study by making the students' data nameless.

Results

Table (1) revealed that 31% of the selected female children had primary education while 25% of them can read and write. 20% of the selected female children had preparatory school. Moreover 52% of the selected female children lived in urban while 64% of them lived in nuclear family. Furthermore 76% of the selected female children had insufficient income. While 72% of them were house-wives. In addition, 39 % of the selected female children had 1st rank between their

sisters/brothers and 26 % of them were the 2nd rank.

Table (2) stated that 37% of the selected female children aged from 16 – 18 years. 49 % of the study sample married to husbands their age between 30 - 40 years. Moreover, 59 % of the selected sample not forced to agree on their marriage. Furthermore, 75% of the study sample had previous early marriage at their families. In addition, 76% of them had not enough information about marriage before their early marriage.

Regarding biological hazards related early marriage; table (3) showed that 68% of the selected female children had menstrual disorders while 52% of them had vaginal tearing during intercourse. 68% of the selected female children had vaginal bleeding as well as 71% of them had uterine rupture. In addition, 63%, 70%, 68%of the study subjects suffered from anemia, osteoporosis and increasing blood pressure respectively. Also, 65%, 80% of the selected female children had muscles cramps during pregnancy and difficult delivery respectively.

Regarding psychological hazards of early marriage; table (4) revealed that, 55% of the selected female children suffered from depression after marriage. 64% of the selected female children exposed to violence after marriage while 70% of them complain of disturbance in the sexual relation. In addition to 68% of the selected sample were addict to escape from problems after marriage.

Regarding the social hazards related early marriage; table (4) reflected that, 72% of the selected female children did not complete their study after marriage. 68% of them suffered from withdraw from their family and friends after marriage. Also, 71%, 95% of the selected sample did not meet social needs and support the concept of early marriage respectively.

Figure (1) indicated that the selected study sample exposed to high biological, psychological and social hazards regarding early marriage 59%, 63% and 60% respectively.

Table (6) illustrated that, there was highly statistically significant with positive correlation between biological hazards and psychological hazards regarding early marriage ($r = 0.685$, $p<0.01$). Also, there was highly statistically significant with positive correlation biological and social hazards regarding early marriage ($r = 0.711$, $p<0.01$). As well as, there was highly statistically significant with positive correlation between psychological and social hazards regarding early marriage ($r = 0.599$, $p<0.01$).

Table (1): Percentage distribution of demographic data among the selected female children (n=100).

Demographic data	No.	%
Educational level:		
▪ Can't read and write	16	16.0
▪ Read and write	25	25.0
▪ Primary education	31	31.0
▪ Preparatory education	20	20.0
▪ Secondary education	7	7.0
▪ University education	1	1.0
Residence:		
▪ Rural	48	48.0
▪ Urban	52	52.0
Type of family:		
▪ Nuclear family	64	64.0
▪ Extended family	36	36.0
Monthly income:		
▪ Sufficient	24	24.0
▪ Insufficient	76	76.0
Employment:		
▪ House wife	72	72.0
▪ Employed	28	28.0
Ranking between sisters/brothers:		
▪ 1st	39	39.0
▪ 2nd	26	26.0
▪ 3rd	18	18.0
▪ 4th	15	15.0
▪ 5th	2	2.0

Table (2): Percentage distribution of marriage data among the selected female children n=100)

Marriage data	NO.	%
Age during marriage:		
12 -	33	33
14 -	30	30
16 > 18	37	37
Husband age during marriage:		
20 -	39	39
30 -	49	49
40 – 50	12	12
Forced marriage:		
Yes	41	41
No	59	59
Previous early marriage in family:		
Yes	75	75
No	25	25
Having knowledge about marriage before marriage:		
Yes	24	24
No	76	76

Table (3): Percentage distribution of biological hazards related early marriage among the selected female children (n=100).

Biological hazards	Yes		No	
	No.	%	No.	%
Menstrual disorders	68	68	32	32
Vaginal tearing	52	52	48	48
Vaginal bleeding	68	68	32	32
Uterine rupture	71	71	29	29
Anemia	63	63	37	37
Osteoporosis	70	70	30	30
Rising in blood pressure during pregnancy	68	68	32	32
Muscle cramps during pregnancy	65	65	35	35
Difficult delivery	80	80	20	20

Table (4): Percentage distribution of psychological hazards related early marriage among the selected female children (n=100).

Psychological hazards	Yes		No	
	No.	%	No.	%
Depression	55	55	45	45
Violence	64	64	36	36
Addiction	32	32	68	68
Disturbance in the sexual relations.	70	70	30	30
Dealing with marital problems properly	15	15	85	85

Table (5): Percentage distribution of social hazards regarding early marriage among the selected female children (n=100).

Social hazards	Yes		No	
	No.	%	No.	%
Complete study	28	28	72	72
Withdraw from family and friends	68	68	32	32
Unmet social needs	29	29	71	71
Divorced	38	38	62	62
Refuse early marriage	5	5	95	95

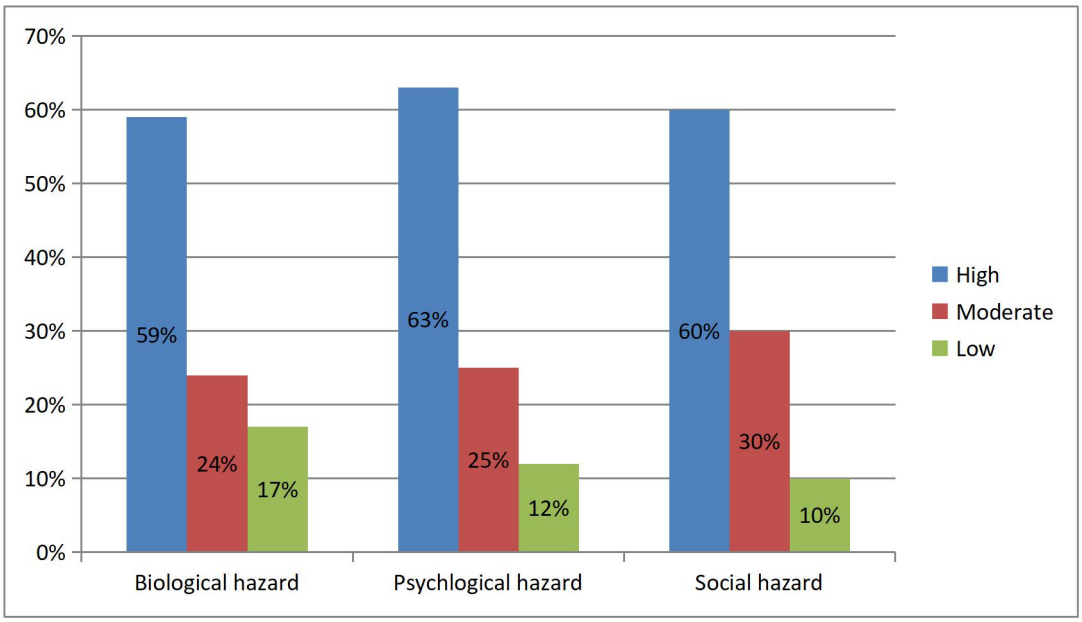

Figure (1): Percentage Distribution of total bio- psychosocial hazards regarding early marriage among the selected female children (n=100).

Table (6): Correlation between total bio- psychosocial hazards regarding early marriage (n=100).

Type of hazards		**Biological**	**Psychological**	**Social**
Biological	r. p		0.685 <0.01**	0.711 <0.01**
Psychological	r. p			0.599 <0.01**
Social	r. p			

**High significant <0.01

Discussion

Marriage before the age of 18 either formal or informal union is called child marriage, is a union where at least one of the partners is below the age of 18 years; this human rights violation has complicated consequences on children and society (United Nations Children's Fund (UNICEF), 2018). Moreover, UNICEF reported that, the health problems of child marriage doesn't affect the married child only, but also extends to future generations and there is an estimate of the number of girls and women who married as children are more than 650 million child brides worldwide, and now 12 million girls are married each year; 40 million of them are in the Middle East and North Africa (2018).

Regarding the socio-demographic of the selected female children; the current study revealed that, near the third of them had primary education while quarter of them read and write and near of quarter had preparatory education. Moreover, more than half of the study sample lived in urban areas with nuclear families. Furthermore, more than half of the study sample were house-wives with insufficient income. In addition, more than the third of the study sample ranking were the 1st rank and the quarter of them were the 2nd rank between their sisters/brothers. From the researcher point of view, the current results may be related to increase the girls' families' need for money, as there is no financial resource for them other than the marriage of their daughters who are not over 18 years old who considered their first dependent offspring to help the rest of the family members.

Also, the current results were in agreement with a cross-sectional study done by Ghrayeb et al, (2015) was conducted on 500 married children

was personally interviewed using a structured questionnaire to determine the prevalence of early marriage in Yatta, south Palestine. Ghrayeb et al who found that nearly half of the total married children were get married before the age of 18 years old and more than half of the total married children were get married in age 18-25 years. The highest prevalence of early marriage was recorded in women who had less than 13 years old. Moreover, the massive majority of the participated women were housewives.

Moreover, the current study was also in the same line with the report of UNICEF (2018) that indicated that, in recent years, there have been 700,000 child brides each year in the Middle East and North Africa. child marriage is often predominant in rural areas versus urban ones. From the researchers' analysis, this may be analyzed that child marriage is a result of the less educational opportunities and lower socio-economic to come from poor households.

Concerning marriage data; the current study revealed that more than the third of study sample were 16 – 18 age group while the third of study subjects in 12 -14 age group and near the third of them in 14 -16 age group. In addition, near than the half of the study subjects married to husbands who aged from 30 -<40 years old and more than third of study subjects married to husbands aged from 20 –<30 years old. Moreover, more than half of the study sample did not force on their marriage. From the researcher point of view, the current study may be related to the desire of the girls to escape from their families' poverty and limited resources to a husband who would be a good financial support for them or the parent may find the early marriage of their girl as a source of economic support or good chance for jobs or more future promises.

Furthermore, the majority of the selected sample had previous cases of early marriage at their families and they did not have enough information about marriage before their early marriage. From the researchers' point of view, the current results may be related to the culture of families that support the marriage of girls as early as possible even under the legal age of marriage. So some Egyptian people had a wrong beliefs that the main role of females is to be marry to get rid of their responsibilities without any paying attention to their age, education, the hazards of early marriage and the ability of female children to be mother and having babies and the reality of marriage and its responsibilities.

Also, the current study were in the same line with the report of UNICEF (2019) that indicated that, while boys and girls who marry in childhood do not face the same risks and consequences due to biological and social differences, the practice is nonetheless the rights violation for children of both sexes. Similar to child brides, child grooms are forced to take on adult responsibilities for which they may not be prepared. The union may bring early fatherhood and result in additional economic pressure in the form of providing for the household; it may also constrain the boy's access to education and opportunities for career advancement.

Concerning the biological hazards related early marriage; the study showed that, more than half of the study sample had menstrual disorders; vaginal tearing during intercourse; vaginal bleeding after the marriage while the majority of the study sample had uterine rupture as a result of early pregnancy. As well as, more than half of the study sample suffered from anemia during pregnancy and the majority of them complained of osteoporosis and difficult delivery. More than half of them had high blood pressure and cramps during pregnancy.

The current study agreed with the report of WHO that stated that, complications of early marriage are the leading cause of death in girls aged from 15-19 years old globally, and 90% of adolescent pregnancies in the developing world are to girls already married. Also, girls who give birth before the age of 15 are 5 times more likely to die in childbirth than girls in their 20s. Child brides are also more vulnerable to other pregnancy-related injuries such as obstetric fistula, which can have devastating long-term consequences, especially if left untreated. In fact, 65% of all obstetric fistula cases occur in girls under 18 (2019).

From the researchers' point of view, the current results were logic consequences for early marriage that may be related to the incomplete maturation of the girls' reproductive system and their lack of knowledge about the correct nature of the marital relationship and sexual intercourse with their husbands, and all of these negatively effect on their life and health especially during

pregnancy and child birth and as well as negatively effects on health of their fetus.

Furthermore, the current results were the same line with report of United Nations Population Fund (UNFPA) (2015),WHO (2016) and Population Council (2019) stated that, child marriage can lead girls who practice sex before they are physically, psychologically, emotionally ready to horrible health problems; physical, psychological and emotionally. Girls know little about their own sexual and reproductive health and rights (SRHR). Child marriage is a key driver of adolescent pregnancy which carries serious health risks and can increase the risk of contracting sexually transmitted infections. In some contexts, child marriage is also closely linked to female genital mutilation/cutting (FGM/C), which is a human rights violation and is damaging to girls' physical and mental health.

Also, the current results were in the same line with the cross-sectional study done by Hamed & Yousef (2018) at Sohag, Upper Egypt that aimed to estimate the prevalence of social and health hazards and to identify the attitudes and factors that affect attitudes toward early marriage. This study included 786 ever-married women as a sample of aged 20–60 years from six clusters; from each district two areas were taken, one representing rural areas and the other representing urban areas. Hamed & Yousef (2018) study revealed that, health hazards included anemia (18%), hemorrhage (27.5%), uterine prolapse (37%), toxemia of pregnancy (8%), and gestational diabetes (4%). Also, mothers reported that many of them had preterm deliveries (36%) and low birth weight infants (31%). Immunization was delayed for most infants born to women younger than 18 years (94%).

In addition, the current results in congruent with the findings presented in the report of WHO (2019) that indicated that, child marriage can increase the risk of girls becoming infected with HIV/AIDS for a few reasons. Firstly, child brides often live in remote regions where access to healthcare and information about sexual health services and rights may be limited. As a result, child brides may not have knowledge of HIV risk factors, prevention, treatment or even their basic human right to say "no" to sex with their husbands. Furthermore, In Africa, the connection between HIV/AIDS and child marriage is of particular concern, as AIDS is now the leading cause of death among adolescents aged 10-19 on the continent.

Concerning the psychological hazards related early marriage, the current study revealed that, more than half of the study sample suffered from depression after the marriage process as a result of violation of girls rights while the majority of the study sample complained to many troubles in the sexual relationship and more than half of them directed to addiction to escape from problems that generated as a result of early marriage. Finally, the majority of the study sample did not deal with marital problems properly. From the researchers" opinions, the current result may be related to the lack of psychological and moral support for girls from their families and the lack of proper guidance and preparation regarding early marriage and the proper practice and behavior. Female children did not have and ability to cope or adapt to face the stressors that lead to more stress and psychological burden.

Furthermore, the current results in agreement with the findings presented in the cross-sectional observational study that done by Ahmed et al, (2014) who examine the level of physiological and psychosocial health burden faced by married girls and to evaluate their views on education, parental support, reproductive health and marital age. The study was done on 100 girls aged from 13- 35 who married before age of 20. Ahmed et al, (2014) study results revealed that, females are exposed to psychological diseases as they are deprived of the freedom to speak or share. Moreover, these females become victims for psychotic disorders like immobility and lack of confidence.

Concerning social hazards related early marriage; the current study revealed that, the majority of the study sample did not complete and did not get their full social rights and did not support the idea of early marriage. Also, more than half of study sample suffered from withdraw from their families and friends after marriage. More than one third of the selected sample were divorced after early marriage. The current result could be related to the girls' lack of prior knowledge about the responsibilities of marriage, marital life, and child care, all of these leads to their gradual withdrawal from social life with their families and friends, and their inability

to complete their studies. Also, the intellectual immaturity of girls makes marriage so difficult for them to understand their husband as a man with a special nature, that lead to solving their marital problems incorrectly.

In addition, the current results were the same line with the cross-sectional study done by Hamed & Yousef (2018) at Sohag, Upper Egypt that aimed to estimate the prevalence, social and health hazards and to identify the attitudes and factors that affect attitudes toward early marriage. This study included 786 ever-married women aged from 20–60 years. This study revealed that, the social problems reported were separation from the husband (17%) and discontinuation of education (23%).

Concerning total bio psychosocial hazards of early marriage; the current study revealed that, more than half of the study sample exposed to high biological hazards level; near than the quarter of them exposed to moderate biological hazards level and less than the quarter of study subjects exposed to low biological hazards level. Furthermore, the exposure of the study sample to the psychological hazards; more than half of them exposed to high psychological hazards level; while quarter of them exposed to moderate psychological hazards level and less than quarter of them exposed to low psychological hazards level. In addition, the exposure of the study subjects to the social hazards; more than half of them exposed to high social hazards level; near of the third of study sample exposed to moderate social hazards level and less than the quarter of them exposed to low social hazards level.

The current result were the same line with qualitative study which done by Freccero & Taylor (2019) on 280 married and unmarried girls aged from 10–17years old, 67 caregivers to understand the risk and protective factors, decision-making processes, service and support needs of girls and their caregivers that contribute to child marriage, and community perspectives on solutions for addressing and responding to child marriage in humanitarian settings. the study revealed that; there were five major perceived disadvantages of child marriage for girls included fear of mistreatment or abuse by their husbands or in-laws, fear of inability to handle heavy domestic and childcare duties, fear of negative health impacts, particularly complications during childbirth and poor birth outcomes, concerns about negative emotional or psychological impacts, such as isolation from friends and family, severe stress, depression, and suicidality; and concerns about the inability to finish school because of refusal from their husbands or domestic workloads.

Moreover, the Freccero & Taylor (2019) study stated that, there were four significant perceived disadvantages of child marriage for caregivers included fear for their daughters' educational and economic prospects, fear for their daughters' health and safety including complications during pregnancy and childbirth and domestic violence, concerns about their daughters' ability to manage issues with their husbands and domestic responsibilities, and concerns about increased risk of divorce when girls marry young.

Regarding the correlation between total biopsychosocial hazards of early marriage, the current study illustrated that, there was highly statistically significant positive correlation between biological hazards and psychological hazards ($r = 0.685$, $p<0.01$). Also, there was highly statistically significant positive correlation between biological hazards and social hazards ($r = 0.711$, $p<0.01$). In addition, there was highly statistically significant positive correlation between psychological hazards and social hazards ($r = 0.599$, $p<0.01$).

The previous results matched with the qualitative study done by Montazeri et al., (2016) that aimed to explore the determinants of early marriage from married girls' perspectives in Iranian setting. The current study may be due to the participants who perceived marriage as an unexpected and stressful event because they were unprepared to accept the roles and responsibilities of an early marriage.

Conclusion

The findings of the current study contribute to the body of knowledge related to the Biopsychosocial hazards of early marriage among girls. Early marriage in Egypt has comparable biological, psychological, and social hazards. Regarding the biological hazards, the present finding demonstrated that more than half of the study subjects' experienced menstrual disorders, vaginal

tearing and bleeding from the effects of intercourse, and the majority of them had uterine rupture as a result of early pregnancy. In addition, the participants experienced anemia, osteoporosis, high blood pressure, and cramps during pregnancy as another biological hazard. Regarding the psychological hazards, the current result showed that the study subjects experienced depression, violence, troubles in the sexual relationship after the marriage and the majority of study sample did not solve marital problems correctly. About the social hazards, the majority of the participants not completed their studies, withdraw from family & their friends after marriage, and the majority of them not supported the idea of early marriage. As well, there was highly statistically significant positive correlation between biological hazards and psychological hazards and social hazards. In addition, there was highly statistically significant positive correlation between psychological hazards and social hazards.

Recommendations

Based on the findings of the current study, the following recommendations are suggested

- Applying health education program among female students in preparatory schools and their caregivers to increase their awareness regarding early marriage and health consequences.
- Periodic follow up for female children by midwifes, obstetrics and gynecological nurse and family health nurses to detect health consequences related to early marriage.
- Home visiting for female children by midwifes, health visitors and family health nurses to detect biopsychosocial problems related early marriage.

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